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A MNEMONIC DEVICE FOR COLOR-WORKERS

Based on a consideration of Ridgway's "Color Standards and Nomenclature"

By WILLIAM LEON DAWSON

WE HAVE ALL caught ourselves making "pictures", geometrical designs or graphs, out of mental concepts. Thought relations of all sorts tend to arrange themselves automatically into spatial groups. Thus, the days of the week to our minds are segments of a closed circle, or steps of a ladder, or links in a chain, as the case may be. If an eighth day were added to the week by statutory decree we should chop open our mental circle, change the curve and insert the new segment, or we should add another rung to our mental image of a ladder, or add an eighth link to our chain. But of all mental graphs I venture to say that our color schemes have been least perfectly organized, least logical, least related. Following the analogy of the chart we have sometimes pictured color groups in two dimensions, but the charts themselves remained dissociated, unorganized, arbitrary. What may be the extent of Ridgway's indebtedness to other color theorists I do not know—he hints at such indebtedness in his "prologue"—but so far as zoological color-workers are concerned it remained for the orderly mind of Robert Ridgway to so present color relations that we may conceive them in three dimensions, to fix it indeed so that we must so conceive them. To be sure the limitations of book making still necessitate the use of dissected charts serially presented. But even with this handicap the sequence is so logical that we are able to reconstruct a mental cube or visualized color-file having length, breadth and thickness.

Color-file is perhaps the best name for this new piece of mental furniture. Let us conceive it as made up of prisms, cubes, of colored glass. To understand its order, therefore, let us examine its first or facing wall—thirty-seven cubes, or columns of cubes, wide, and nine tiers, or rows of cubes, deep. The central tier reading from left to right comprises the pure colors of the spectrum, red, orange, yellow, etc., together with carefully selected intergrades, orange-red, orange orange-red, red-orange, etc.,—thirty-six colors to be known as *hues* (with red repeated at the extreme right to give meaning to the violet-red series). The bottom tier of our wall is pure black, the limit, or asymptote, of the successively deepening *shades* produced by mixing the pure color of the central member of each column with increasing percentages of black. The top tier of our wall is pure white, the limit, or asymptote, of successively lightening *tints* of the central color produced by increasing dilutions of white. In Ridgway's scheme three steps are made in each direction, so that we have seven colored tiers separating the black and the white boundary tiers.

So much is commonplace; the next step is inspiration—Ridgway's. The third dimension of our color file is secured by progressive dilutions of *neutral gray*, additions of a uniform amount in a given wall, each block differing from its neighbors in the same wall in precisely the same *degree* in which the pure color blocks differ from their neighbors. It is obvious that if progressive additions of gray differed only by one percent, we should have one hundred walls, bounded on the rear by a wall whose central tier was pure neutral gray and whose successive *tints* approached the top layer of pure white, and whose successive *shades* approached the bottom layer of pure black, as in the first wall. As a matter of convenience only five such progressively grayed intermediate walls are found necessary to cover for practical purposes the whole range.

The secret of this magic fortress is the value of *neutral gray*. To parody Goethe: *Grau ist eine ganz besondere Farbe*. Gray (neutral) is a tint of a very special kind. It is the epitome or synthesis of all other colors in turn, including that color positive and negative of color, black-and-white. Its use precludes the necessity of an intimate acquaintance with color combinations. You do not have to puzzle over a given color and say, this is blue *plus* red *plus* green *plus* violet. You have only to say, this is blue plus so much (or approximately so much) neutral gray, and you have it. All this may be rice to the initiated, but it is still "caviar to the general."

Once you get the idea you cannot get away from the color-file. It has the ultimate authority of simplicity, of logical sequence, and of comprehensiveness. One even ventures to hope that such a color-file may one day be actualized in glass or blocks of painted wood, as a recognized essential of the color-worker's apparatus. With such a device one might, for instance, by lifting off the top layer of white prisms survey all possible light tints at a glance, or by lifting off the four top layers (or whatever number you elect to have in your scheme) view all the pure colors and all gray tones thereof at a glance. This would be simplicity itself. Meanwhile this mental or "mnemonic" color-file will be found indispensable.

A PRACTICAL SYSTEM OF COLOR DESIGNATION

A Partial Critique of Ridgway's "Color Standards and Nomenclature"

By WILLIAM LEON DAWSON

WE ARE UNDER deep and lasting obligation to Mr. Ridgway for having brought order out of chaos in the standardization of color. He has shown a comprehensive grasp of the whole color problem, and has brought to its solution a practical sagacity never before equalled. Thanks to him we have at last a real color key. The first edition of "Color Standards and Nomenclature" might have been a hundred thousand copies instead of one thousand if attention could first have been properly aroused to this most exquisite and intimate of human interests, color appreciation. However, we are overjoyed to see an authoritative beginning made. The practical standardization of color has been accomplished; but the same cannot be said of the equally practical (though perhaps not equally important) standardization of color names. The reason for this is apparent. Color names have arisen singly and at haphazard, according to the convenience, or necessity, or caprice of the individual. Collectively, they have come down to us with a thousand varying sanctions of experience, of poetry, and nature and all the handicrafts besides. For every color name that has lived, a dozen have been still-born, or died in infancy. To make selection from this motley host is not only to be arbitrary and capricious, by reason of the thousands of other names rejected, but it is to fail in the fundamental purpose, which is to fix concepts in their necessary relations.

Now the function of language is to communicate thought, ideas. This it does by the use of words, words which are chiefly the symbols of a common experience. The more established the value of the component words, *i. e.*, the more certain their appeal to common experience, the clearer the language, the more